

## ABSTRACT

A capacitive motion encoder, for sensing the position of a moving object relative to a stationary object, includes at least one stationary element, coupled to the stationary object and a moving element, coupled to the moving object and in proximity to the stationary element. A field transmitter generates an electrostatic field, which is modulated by a change in capacitance between the stationary and moving elements responsive to relative motion of the elements. A conductive shield, is electrically decoupled from both the moving and the stationary objects, and encloses the moving and stationary elements so as to shield the elements from external electrical interference. Processing circuitry is coupled to sense the modulated electrostatic field and to determine responsive thereto a measure of the position of the moving object.